## (19) World Intellectual Property Organization

International Bureau





## (43) International Publication Date 14 July 2005 (14.07.2005)

## **PCT**

# (10) International Publication Number WO 2005/064748 A1

(51) International Patent Classification<sup>7</sup>:

H01Q 13/08

(21) International Application Number:

PCT/SE2004/002011

(22) International Filing Date:

27 December 2004 (27.12.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

PCT/SE2003/002102

30 December 2003 (30.12.2003) SE

- (71) Applicant (for all designated States except US): TELE-FONAKTIEBOLAGET LM ERICSSON (publ) [SE/SE]; S-164 83 Stockholm (SE).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): SVENSSON,
  Bengt [SE/SE]; Muraregatan 10, S-431 66 Mölndal (SE).
  HÖÖK, Anders [SE/SE]; Klåddegärdevägen 27, S-430
  63 Hindås (SE). JOHANSSON, Joakim [SE/SE]; Henå
  Ekhaga, S-517 93 Töllsjö (SE).

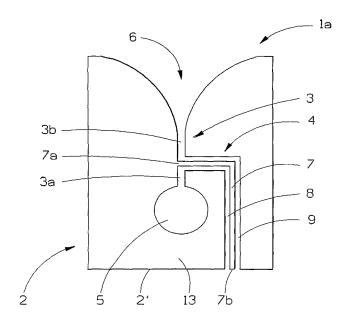
- (74) Agent: ALBIHNS GÖTEBORG AB; Box 142, S-401 22 Göteborg (SE).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### **Declaration under Rule 4.17:**

of inventorship (Rule 4.17(iv)) for US only

[Continued on next page]

## (54) Title: ANTENNA DEVICE AND ARRAY ANTENNA



(57) Abstract: The present invention relates to a broadband non-resonant antenna device for wireless transmission of information using electromagnetic signals, comprising a metal sheet layer, forming a plane, with a slotline that comprises a first part and a second part. The side of the second part that is the most distant from the first part transcends into a widening open-ended tapered slot in the metal sheet layer. The device additionally comprises a feeding line in the metal sheet layer. The feeding line comprises a feeding part, with a first end and a second end, and gaps separating the feeding part from the surrounding metal sheet layer by a certain distance, where the slotline is intersected by the feeding line.



### 

## Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.